PM Conformity Hot Spot Analysis
Project Summary Form for Interagency Consultation

The purpose of this form is to provide sufficient information to allow the Transportation Conformity Working Group (TCWG) to determine if a project requires a project-level PM hot spot analysis pursuant to Federal Conformity Regulations.

The form is not required under the following circumstances:

1. The project sponsor determines that a project-level PM hot spot analysis is required or otherwise elects to perform the analysis; or
2. The project does not require a project-level PM hot spot analysis since it:
    a. Is exempt pursuant to 40 CFR 93.126; or
    b. Is a traffic signal synchronization project under 40 CFR 93.128; or
    c. Uses no Federal funds AND requires no Federal approval; or
    d. Is located in a Federal PM attainment area (note: PM10 and PM2.5 areas differ).

Projects other than those listed above may or may not need a project-level PM hot spot analysis depending on whether it is considered a "Project of Air Quality Concern" (POAQC), and should be brought before the TCWG for a determination.

It is the responsibility of the project sponsor to ensure that the form is filled out completely and provides a sufficient level of detail for the TCWG to make an informed decision on whether or not a project requires a project-level PM hot spot analysis. For example, the TCWG will be reviewing the effects of the project, and thus part of the required information includes build/no build traffic data. It is also the responsibility of the project sponsor to ensure a representative is available to discuss the project at the TCWG meeting if necessary.

Instructions:

1) Fill out form in its entirety. Enter information in gray input fields.

2) Be sure to include RTIP ID#. See http://scag.ca.gov/rtip/ if necessary.

3) Submit completed form to your local Transportation Commission who will submit it to the MPO. Caltrans projects can be submitted by Caltrans District representative.

The TCWG meets the fourth Tuesday of each month at SCAG Headquarters, 818 W. 7th Street, 12th Floor, Los Angeles, CA 90017. Participation is also available via teleconference. Call (213) 236-1800 prior to meeting to get the call-in number and pass-code.

Forms must be submitted by the second Tuesday of the month to be considered at that month's TCWG meeting.

REFERENCE

Criteria for Projects of Air Quality Concern (40 CFR 93.123(b)(1)) – PM_{10} and $PM_{2.5}$ Hot Spots

(i) New or expanded highway projects that have a significant number of or significant increase in diesel vehicles;

(ii) Projects affecting intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;

(iii) New bus and rail terminals and transfer points than have a significant number of diesel vehicles congregating at a single location;

(iv) Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and

(v) Projects in or affecting locations, areas, or categories of sites which are identified in the PM10 or PM2.5 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

Links to more information:

http://www.fhwa.dot.gov/environment/conform.htm

http://www.epa.gov/otaq/stateresources/transconf/index.htm

TABLE 1
Type of Project

- New state highway
- Change to existing state highway
- New regionally significant street
- Change to existing regionally significant street
- New interchange
- Reconfigure existing interchange
- Intersection channelization
- Intersection signalization
- Roadway realignment
- Bus, rail, or inter-modal facility/terminal/transfer point
- Truck weight/inspection station
- At or affects location identified in the SIP as a site of actual or possible violation of NAAQS

RTIP ID# *OH1300*

Project Description:

The California Department of Transportation, in coordination with the City of Fontana, propose to 1) construct a new interchange on Interstate 15 (I-15) in Fontana and unincorporated areas of San Bernardino County at the existing Duncan Canyon overcrossing; 2) widen the Duncan Canyon Road over-crossing (Bridge No. 54-980) at PM 11.03; 3) construct a 5-foot-wide sidewalk along the north and south sides of the overcrossing, along with an 8-foot-wide Class II bike lane/shoulder; 4) install traffic signals at the intersection of each off-ramp with Duncan Canyon Road; and 5) include high-occupancy vehicle (HOV) lane with each on-ramp. Included as an attachment are figures that show the project location (local and regional context), existing bridge structure, and cross-section drawings of proposed project improvements.

Type of Project *(use Table 1 on instruction sheet)*

New interchange

County	**Narrative Location/Route & Postmiles:**
San Bernardino	Project is located at the Interstate 15/Duncan Canyon Road overcrossing, in the City of Fontana in San Bernardino County. 08-SBd-15-PM 11.03 **Caltrans Projects – EA#** OH130K

Lead Agency: Caltrans and City of Fontana

Contact Person	**Phone#**	**Fax#**	**Email**
Paul Balbach	(909) 350-7629	(909) 350-7676	PBalbach@Fontana.org

Hot Spot Pollutant of Concern *(check one or both)* **PM2.5 √** **PM10 √**

Federal Action for which Project-Level PM Conformity is Needed *(check appropriate box)*

√ **Categorical Exclusion (NEPA)**	**EA or Draft EIS**	**FONSI or Final EIS**	**PS&E or Construction**	**Other**

Scheduled Date of Federal Action:

Current Programming Dates *as appropriate*

	PE/Environmental	**ENG**	**ROW**	**CON**
Start	3/05	3/05	8/05	
End	9/07	9/08	12/08	9/2010

Project Purpose and Need (Summary): *(attach additional sheets as necessary)*

With the planned improvements in the project area, the Sierra Avenue and I-15 ramp intersections are predicted to operate at LOS D under future (2030) conditions without the proposed project during the AM and PM peak hours, with the exception of the southbound ramp intersection, which would operate as LOS E during the AM peak hour, and the I-15/Summit Avenue northbound ramp intersection, which is expected to operate at LOS F during the PM peak hour. The proposed interchange and widening of Duncan Canyon Road would serve to: Provide congestion relief on local roads and the adjacent Summit Avenue and Sierra Avenue Interchanges; satisfy local access demands to I-15 in support of rapidly changing land use patterns in the southwest portion of the County; and reduce response times for emergency service vehicles by reducing the existing 3.24 miles spacing between the Sierra Interchange at the north and the Summit interchange at the south.

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic):*

Immediately surrounding land uses consist primarily of vacant land; recently constructed houses, park and fire station are located in the northwest quadrant of the site. In the immediate project vicinity, I-15 is an eight-lane interstate highway with four northbound and four southbound lanes; Duncan Canyon Road is a two-lane, primary highway facility between Citrus Avenue and Lytle Creek Road. The remaining segment of Duncan Canyon Road, from Lytle Creek Road to Bridlepath Drive, is classified as a secondary highway. Within the Inland Empire region of Southern California, I-15 serves as the primary north-south route. The approximately 8-mile stretch of I-15 between Interstate 210 and Interstate 215 is served by five freeway interchanges. Duncan Canyon overcrossing is located within the 3.24 miles spacing between the Sierra Interchange at the north and the Summit interchange at the south.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Table 1

OPENING YEAR: I-15 Ramps at Duncan Canyon Road										
	Build - 2010					No Build – 2010[a]				
Location	AM LOS	PM LOS	AADT[b]	Truck Only AADT	Truck %[c]	AM LOS	PM LOS	AADT	Truck Only AADT	Truck %
I-15 Northbound On Ramps	B	D	2,699	270	10	-	-	-	-	-
I-15 Northbound Off Ramps	B	F	11,543	1,154	10	-	-	-	-	-
I-15 Southbound On Ramps	C	B	9,441	944	10	-	-	-	-	-
I-15 Southbound Off Ramps	D	B	3,076	308	10	-	-	-	-	-

[a] No calculations possible for ramps under No Build conditions.

[b] AADT - Calculated from averaged AM and PM projected peak hour traffic volumes and multiplied by factor of 13.43. Factor derived from 2005 average conversion factor of peak hour to AADT for I-15 segments at Junction 210, Summit Avenue, and Sierra Avenue. Duncan Canyon Road/I-15 Interchange Traffic Impact Analysis, Meyer Mohaddes Associates (2006), and http://traffic-counts.dot.ca.gov/2005all/r012-15i.htm

[c] Truck percentage conservatively derived from the average percent of heavy truck traffic along Interstate 15 at SBD PM 5.3 and PM 16.3. Actual truck percentages are expected to be much lower. http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/truck2005final.pdf

Table 2

OPENING YEAR: Duncan Canyon Road											
Location		Build - 2010					No Build - 2010[a]				
From	To	AM LOS	PM LOS	AADT[b]	Truck Only AADT	Truck %	AM LOS	PM LOS	AADT	Truck Only AADT	Truck %
Lytle Creek Road (W)	Lytle Creek Road (E)	B	B	20,040	1,002	5	-	-	-	-	-
Lytle Creek Road (E)	Citrus Ave	B	B	17,380	869	5	-	-	-	-	-

E – East

W – West

[a] No calculations possible for No Build – 2010 conditions; data unavailable.

[b] AADT - Calculated from averaged AM and PM projected peak hour traffic volumes and multiplied by factor of 13.43. Factor derived from 2005 average conversion factor of peak hour to AADT for I-15 segments at Junction 210, Summit Avenue, and Sierra Avenue. Duncan Canyon Road/I-15 Interchange Traffic Impact Analysis, Meyer Mohaddes Associates (2006), and http://traffic-counts.dot.ca.gov/2005all/r012-15i.htm

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Table 3

HORIZON YEAR: I-15 Ramps at Duncan Canyon Road										
	Build - 2030					No Build - 2030[a]				
Location	AM LOS	PM LOS	AADT[b]	Truck Only AADT	Truck %[c]	AM LOS	PM LOS	AADT	Truck Only AADT	Truck %
I-15 Northbound On Ramps	B	C	4,499	500	10	-	-	-	-	-
I-15 Northbound Off Ramps	B	C	19,239	1,924	10	-	-	-	-	-
I-15 Southbound On Ramps	B	B	14,672	1,467	10	-	-	-	-	-
I-15 Southbound Off Ramps	B	B	4,855	486	10	-	-	-	-	-

[a] No calculations possible for ramps under No Build conditions.

[b] AADT - Calculated from averaged AM and PM projected peak hour traffic volumes and multiplied by factor of 13.43. Factor derived from 2005 average conversion factor of peak hour to AADT for I-15 segments at Junction 210, Summit Avenue, and Sierra Avenue. Duncan Canyon Road/I-15 Interchange Traffic Impact Analysis, Meyer Mohaddes Associates (2006), and http://traffic-counts.dot.ca.gov/2005all/r012-15i.htm

[c] Truck percentage conservatively derived from the average percent of heavy truck traffic along Interstate 15 at SBD PM 5.3 and PM 16.3. Actual truck percentages are expected to be much lower. http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/truck2005final.pdf

Table 4

HORIZON YEAR: Duncan Canyon Road											
Location		Build - 2030					No Build - 2030				
From	To	AM LOS	PM LOS	AADT[a]	Truck Only AADT	Truck %	AM LOS	PM LOS	AADT[a]	Truck Only AADT	Truck %
Lytle Creek Road (W)	Lytle Creek Road (E)	C	B	39,545	1,977	5	B	B	11,268	563	5
Lytle Creek Road (E)	Citrus Ave	B	B	26,457	1,323	5	B	B	14,626	731	5

E – East

W – West

[a] AADT - Calculated from averaged AM and PM projected peak hour traffic volumes and multiplied by factor of 13.43. Factor derived from 2005 average conversion factor of peak hour to AADT for I-15 segments at Junction 210, Summit Avenue, and Sierra Avenue. Duncan Canyon Road/I-15 Interchange Traffic Impact Analysis, Meyer Mohaddes Associates (2006), and http://traffic-counts.dot.ca.gov/2005all/r012-15i.htm

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Refer to Tables 1 and 2.

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Table 5

HORIZON / DESIGN YEAR (I-15)										
	Build - 2030					No Build - 2030				
Location	AM LOS	PM LOS	AADT[a]	Truck Only AADT	Truck %[b]	AM LOS	PM LOS	AADT[a]	Truck Only AADT	Truck %[b]
I-15 Northbound										
Summit Ave	A	F	143,000	14,300	10	A	F	137,000	13,700	10
Duncan Canyon Rd	A	F	135,000	13,500	10	A	F	137,000	13,700	10
Sierra Ave	A	F	145,000	14,500	10	A	F	145,000	14,500	10
1-15 Southbound										
Summit Ave	F	E	164,000	16,400	10	F	D	161,000	16,100	10
Duncan Canyon Rd	F	D	158,000	15,800	10	F	D	161,000	16,100	10
Sierra Ave	F	E	168,000	16,800	10	F	E	169,000	16,900	10

[a] AADT - Calculated from averaged AM and PM projected peak hour traffic volumes and multiplied by factor of 13.43. Factor derived from 2005 average conversion factor of peak hour to AADT for I-15 segments at Junction 210, Summit Avenue, and Sierra Avenue. Duncan Canyon Road/I-15 Interchange Traffic Impact Analysis, Meyer Mohaddes Associates (2006), and http://traffic-counts.dot.ca.gov/2005all/r012-15i.htm

[b] Truck percentage conservatively derived from the average percent of heavy truck traffic along Interstate 15 at SBD PM 5.3 and PM 16.3. Actual truck percentages are expected to be much lower. http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/truck2005final.pdf

Describe potential traffic redistribution effects of congestion relief *(impact on other facilities)*

The proposed project is a new interchange project that aims to reduce congestion at the Sierra and Summit Avenue interchanges and satisfy local access demands to the I-15 freeway by providing an additional access point along the I-15 freeway; reduce traffic congestion conditions on local roads; and serve the local transportation network needs of planned future development on adjacent vacant land.

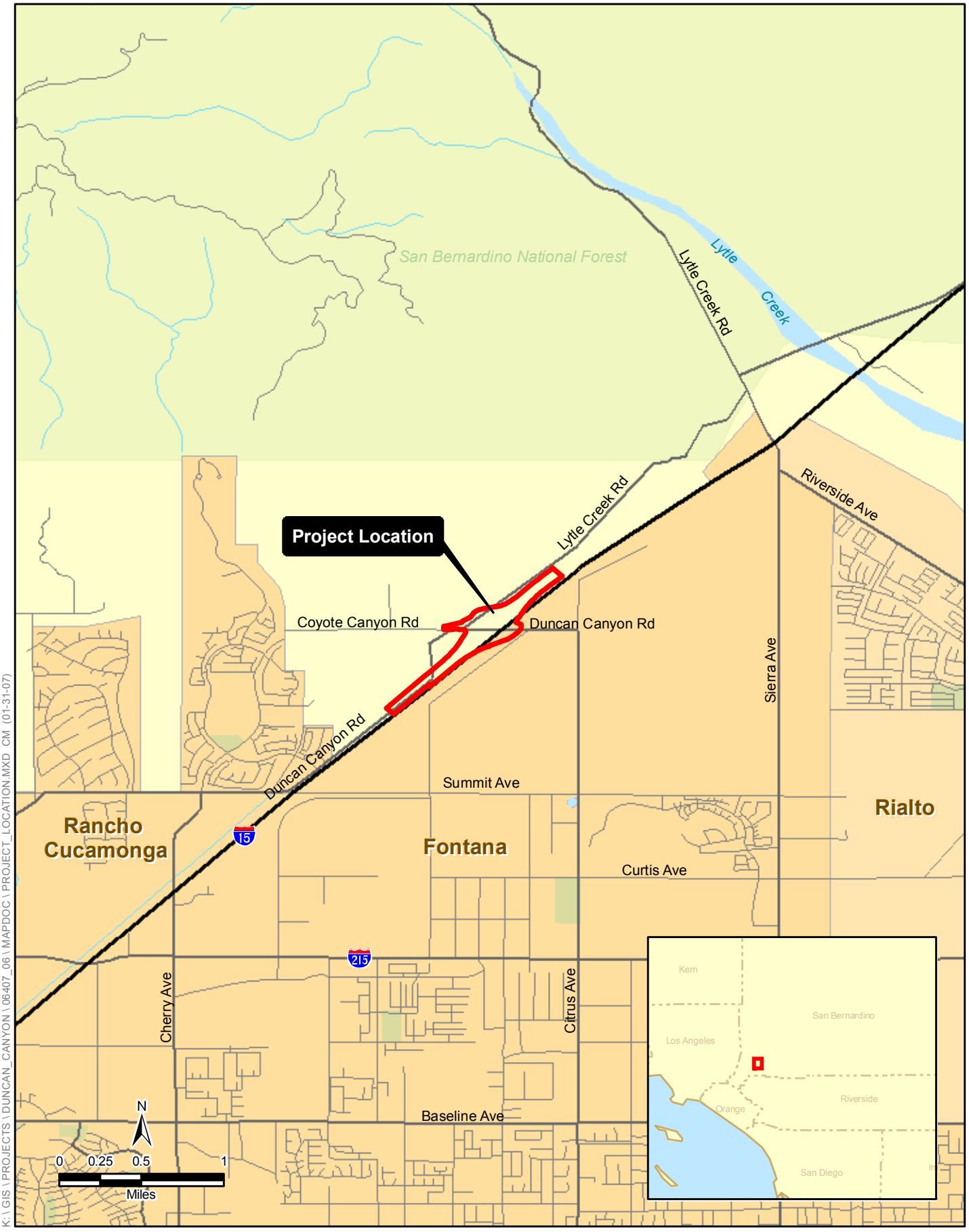
Comments/Explanation/Details *(attach additional sheets as necessary)*

The EPA's March 2006 guidance document *Transportation Guidance for Qualitative Hot-spot Analysis in PM2.5 and PM10 Nonattainment and Maintenance Areas* references a two step criteria to identify "a significant volume of diesel truck traffic." The first criterion is facilities with greater than 125,000 AADT volumes. If the first criterion is met, the second criterion is that 8% or more of said traffic volumes (i.e., 10,000 vehicles or more) are diesel truck traffic volumes. With respect to surface street traffic volumes along project limits of Duncan Canyon, and along the other nearby roadway segments, opening year (2010) AADT volumes are forecast to be far below the above-mentioned screening-level threshold criteria of 125,000 and 10,000 for total AADT traffic volumes and diesel truck traffic volumes, respectively. As such, the project would not result in a significant number of, or significant increase in, diesel vehicles on project area surface streets.

With respect to traffic volumes along the freeway mainline, traffic volumes would be unchanged, or lower along all but one freeway segment, when compared to the No-Build condition. Along I-15 northbound and southbound from Summit Avenue, freeway mainline volumes are expected to increase by approximately 4% and 2%, respectively. However, since Duncan Canyon Road is a local-serving facility that provides access to typical residential and local-serving retail/commercial land uses that are not anticipated to generate significant amounts of diesel-powered, heavy-duty truck traffic, it is unlikely that these localized traffic increases would contain a significant number of diesel truck traffic. As such, the proposed **new interchange project** would not result in a substantial increase in heavy-duty diesel-powered truck volumes along the I-15 Freeway mainline or Duncan Canyon Road.

According to the Transportation Conformity Guidance for Qualitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas (page 25), this project is not a project of air quality concern under 40 CFR 93.123(b)(1)(I) and (ii):

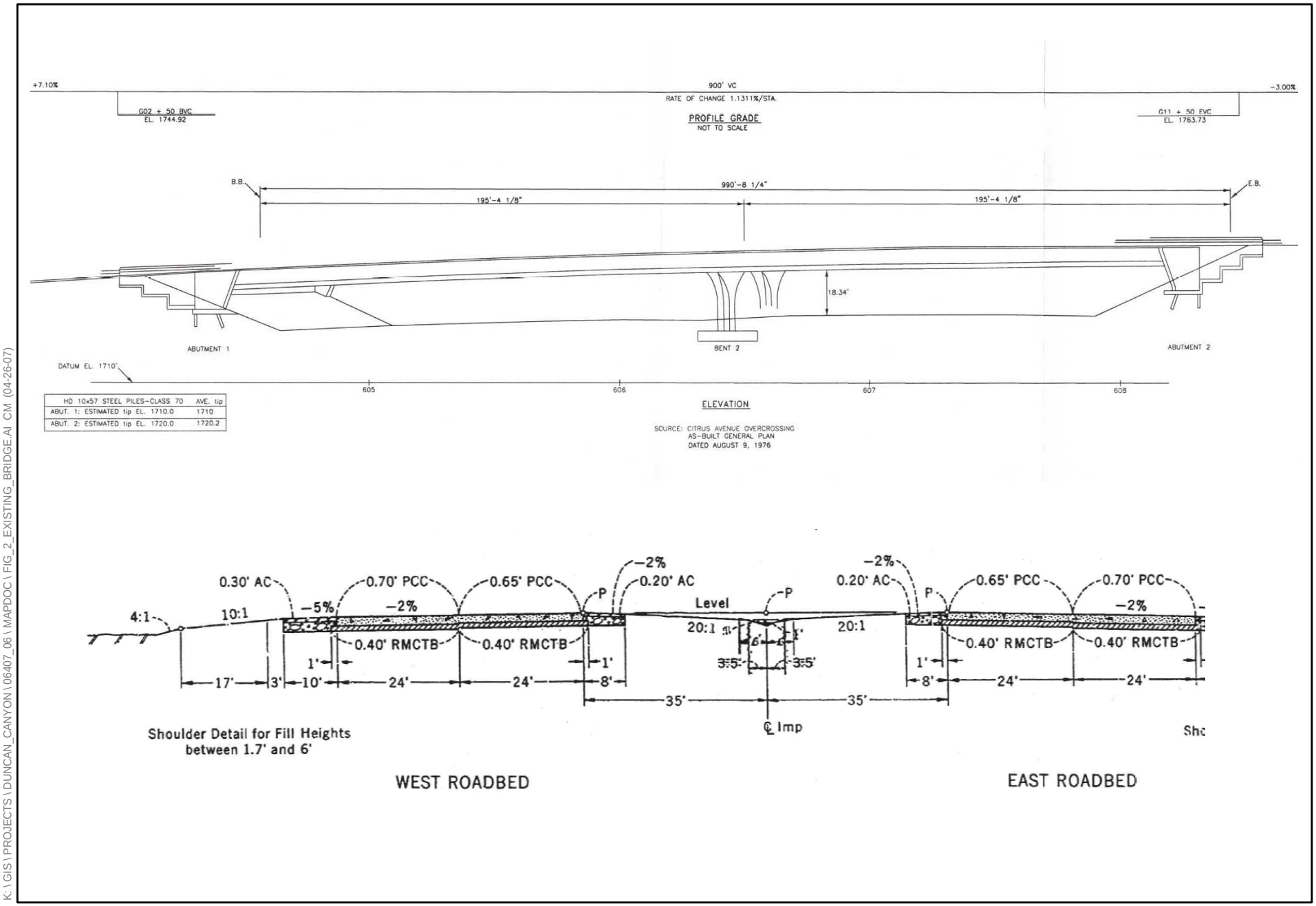
The project site is not in or affecting an area or location identified in any PM10 or PM2.5 implementation plan. The immediate project area is not considered to be a site of violation or possible violation.



SOURCE: ESRI Streetmap USA (2005)

Jones & Stokes

Figure 1
Project Vicinity and Location Map
Interstate 15/Duncan Canyon Interchange Project



K:\GIS\PROJECTS\DUNCAN_CANYON\06407_06\MAPDOC\FIG_2_EXISTING_BRIDGE.AI CM (04-26-07)

SOURCE: Kleinfelder January 2006; Lim & Nascimento Engineering 4/25/07

Figure 2
Existing Bridge Elevation and Section
Interstate 15/Duncan Canyon Interchange Project

Legend

- Proposed Improvements - Alternative 2
- Proposed Right of Way (Local)
- Proposed Right of Way (State)
- Existing Right of Way (Local)
- Existing Right of Way (State)

Limit of Improvements

Joins Existing

Joins Existing

Joins Existing

Joins Existing

Limit of Improvements

Coyote Canyon Rd

Hawker-Crawford Channel

Hawker-Crawford Channel

Duncan Canyon Rd

Lytle Creek Rd

I - 15

I - 15

Lytle Creek Rd

Duncan Canyon Rd

0 250 500 1,000

Feet

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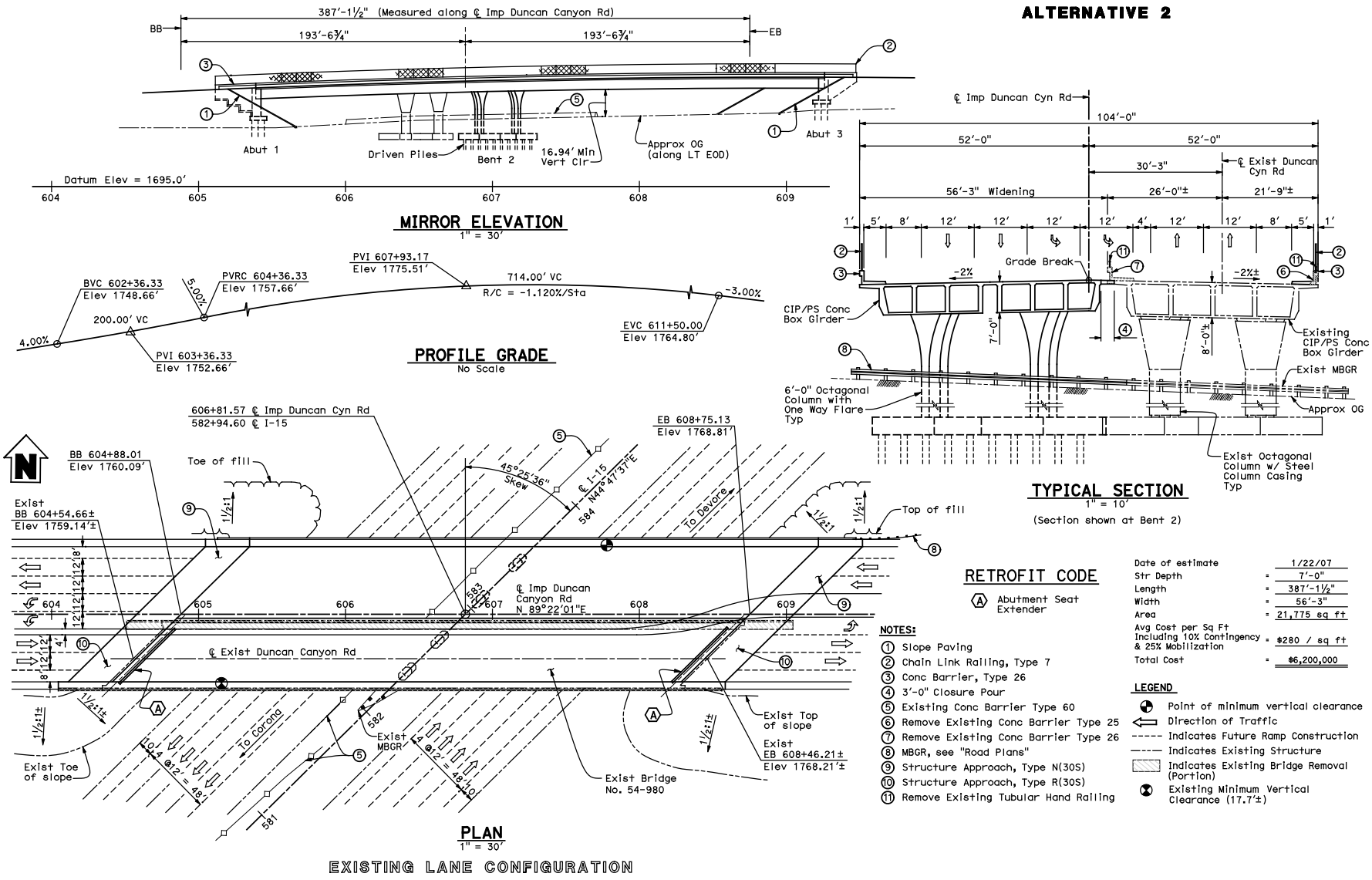
SOURCE: LAN Engineering

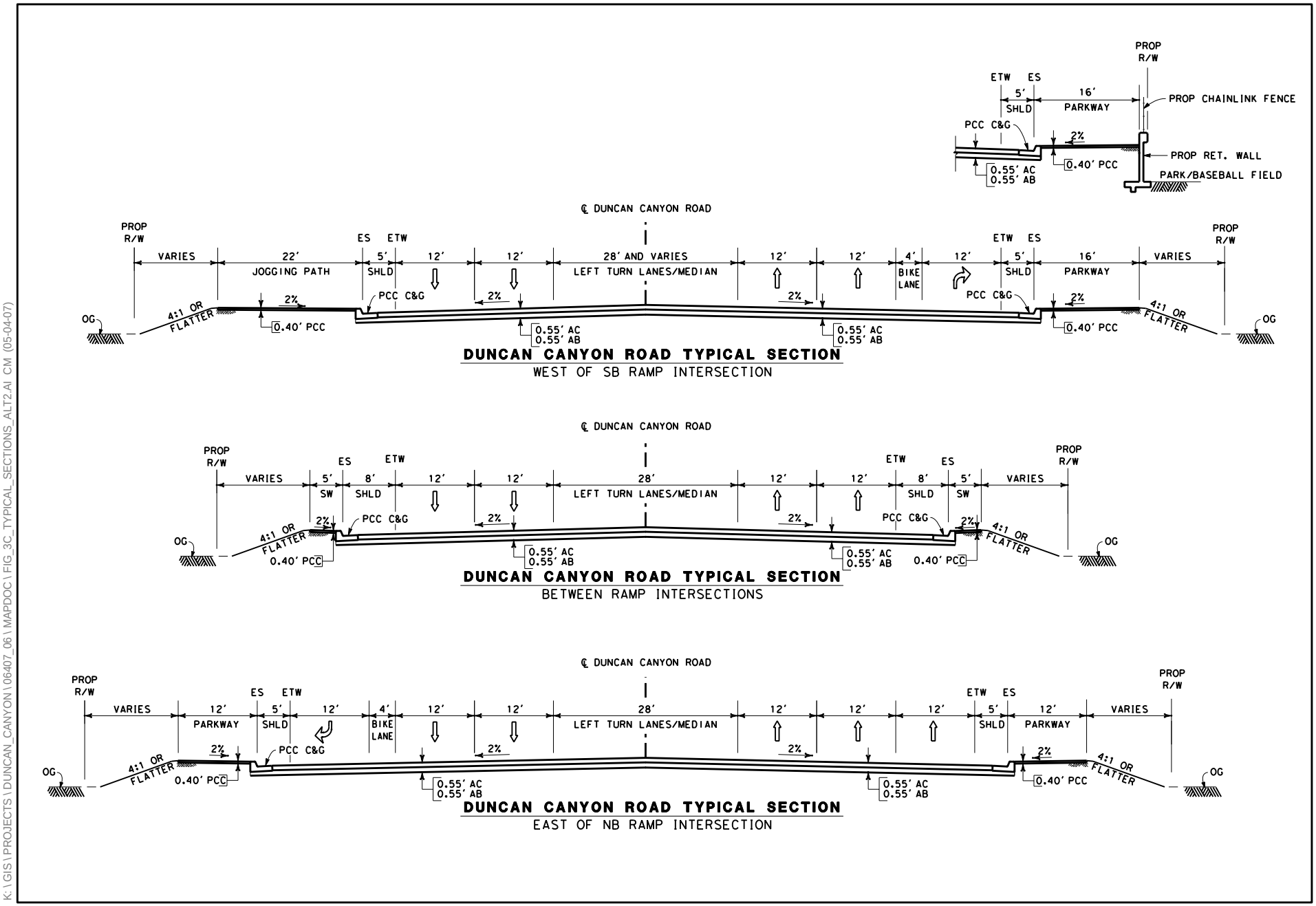
Figure 3a
Build Alternative 2
Interstate 15/Duncan Canyon Interchange Project



K:\GIS\PROJECTS\DUNCAN_CANYON\06407_06\MAPDOC\FIG_3B_BRIDGE_SECTIONS_ALT2.AI CM (05-04-07)

SOURCE: LIM & Nascimento Engineering (4/20/07)

Figure 3b
Alternative 2 Duncan Canyon Bridge Sections
Interstate 15/Duncan Canyon Interchange Project



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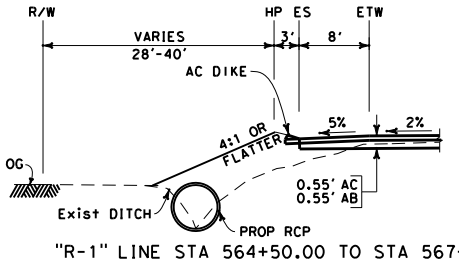
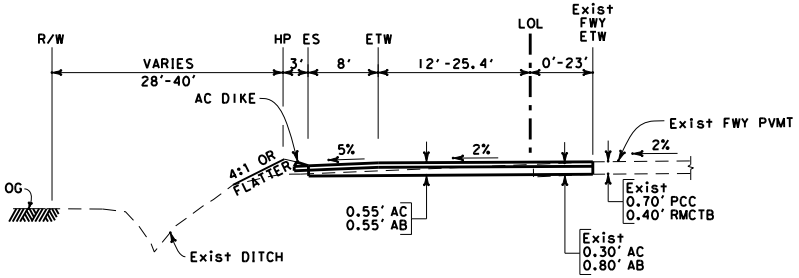
SOURCE: LAN Engineering

Figure 3c
Alternative 2 Duncan Canyon Typical Sections
Interstate 15/Duncan Canyon Interchange Project

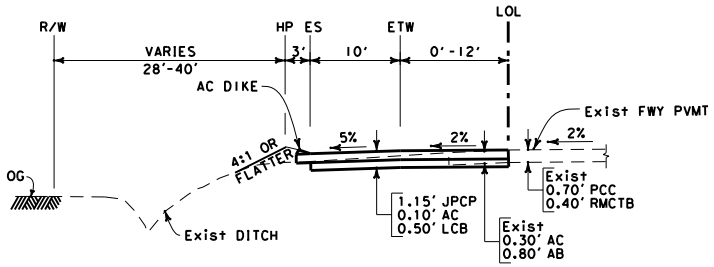


"R-1" LINE STA 564+50.00 TO STA 567+55.68



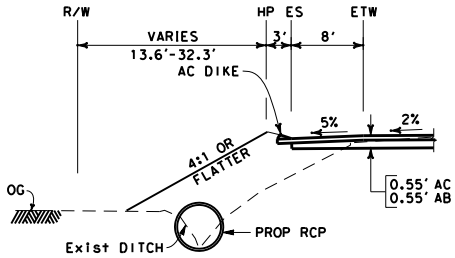
SB ENTRANCE RAMP

"R-1" LINE STA 561+69.81 TO STA 567+55.68

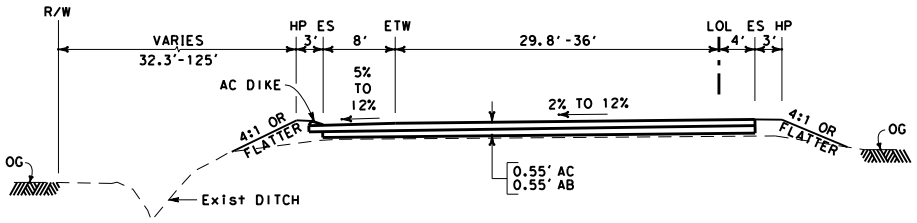


SB AUXILIARY LANE

RTE 15 STA 545+69.63 TO STA 561+69.81



"R-1" LINE TO STA 569+27.41 TO STA 572+00.00



SB ENTRANCE RAMP

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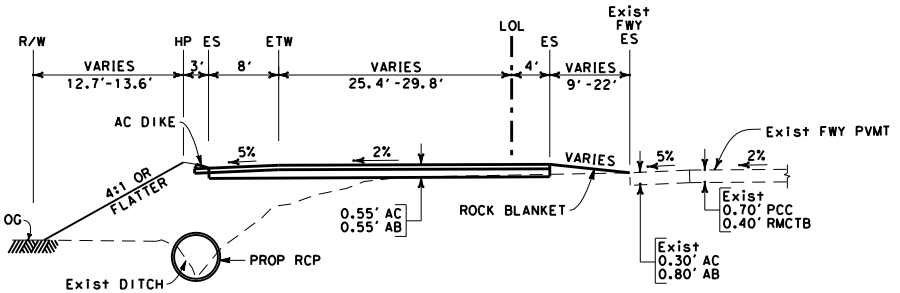

SB ENTRANCE RAMP

"R-1" LINE STA 567+55.68 TO STA 569+27.41

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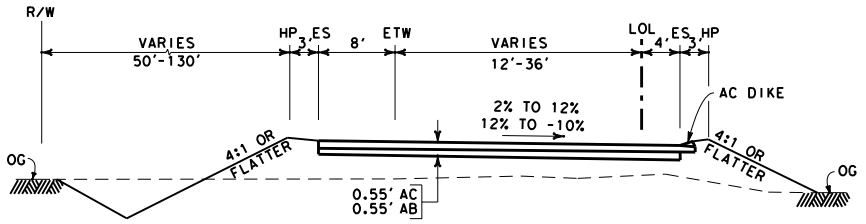
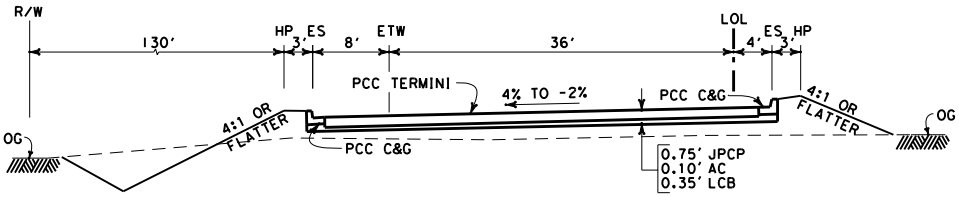
SOURCE: LAN Engineering

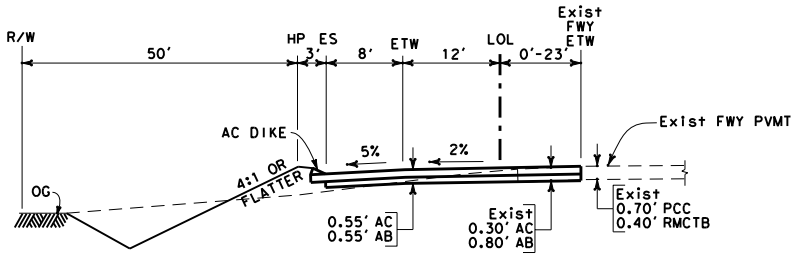
Figure 3d
Alternative 2 Southbound Ramps Typical Sections
Interstate 15/Duncan Canyon Interchange Project



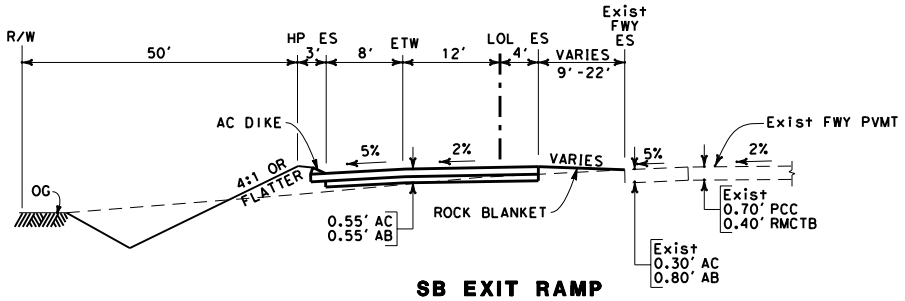
SB EXIT RAMP
"R-4" LINE STA 580+50.00 TO STA 596+23.56



SB EXIT RAMP
"R-4" LINE STA 579+91.86 TO STA 580+50.00



SB EXIT RAMP
"R-4" LINE STA 597+76.73 TO STA 600+47.33

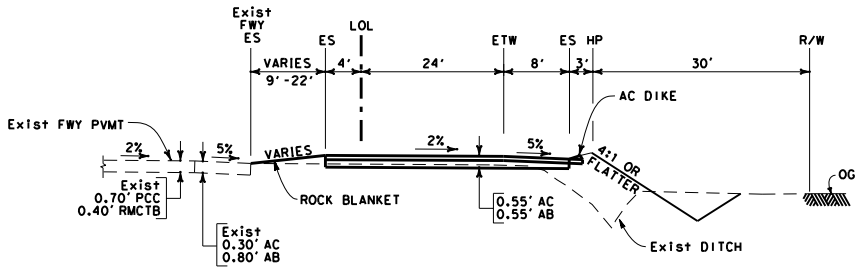


SB EXIT RAMP
"R-4" LINE STA 596+23.56 TO STA 597+76.73

K:\GIS\PROJECTS\DUNCAN_CANYON\06407_06\MAPDOC\FIG_3E_SB_RAMPS_ALT2.AI CM (05-04-07)

SOURCE: LAN Engineering

Figure 3e
Alternative 2 Southbound Ramps Typical Sections
Interstate 15/Duncan Canyon Interchange Project



NB EXIT LANE
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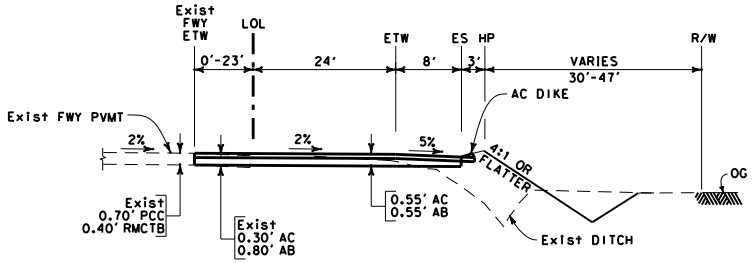

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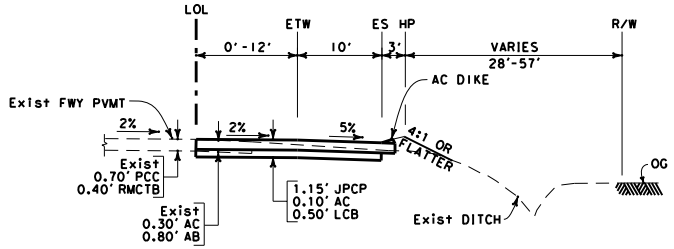
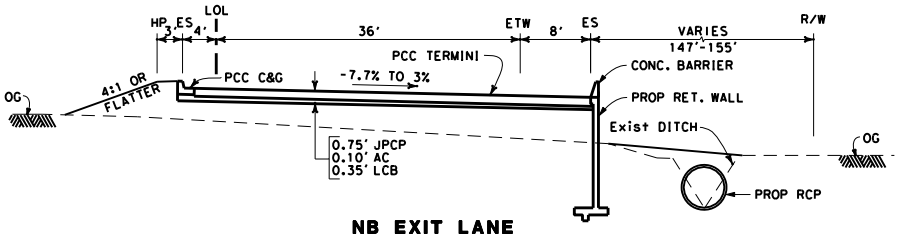


NB AUXILIARY LANE
RTE 15 STA 549+71.86 TO STA 566+63.75



NB EXIT LANE
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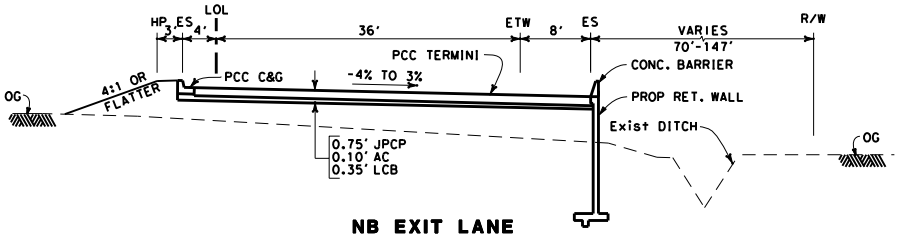
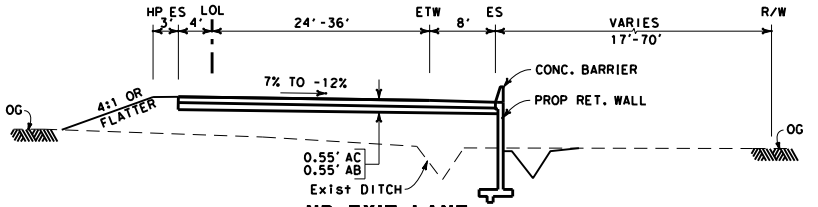
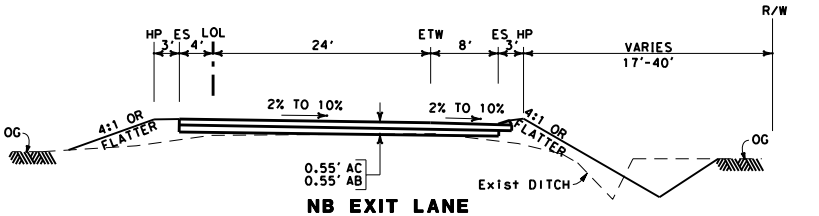


NB EXIT LANE
"R-2" LINE STA 585+33.68 TO STA 586+55.72



NB EXIT LANE
"R-2" LINE STA 578+60.00 STA 585+33.68

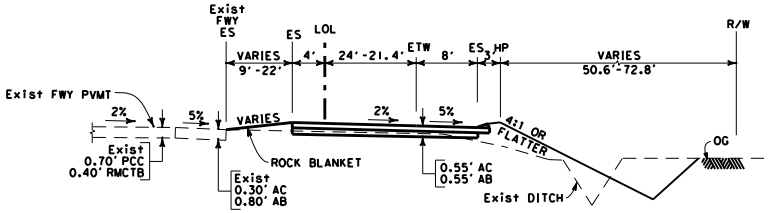


NB EXIT LANE
"R-2" LINE STA 570+87.56 TO STA 578+60.00

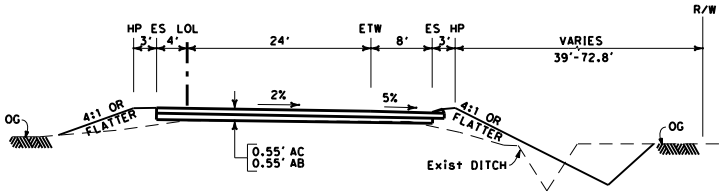
K:\GIS\PROJECTS\DUNCAN_CANYON\06407_06\MAPDOC\FIG_3F_NB_RAMPS_ALT2.AI CM (05-04-07)

SOURCE: LAN Engineering

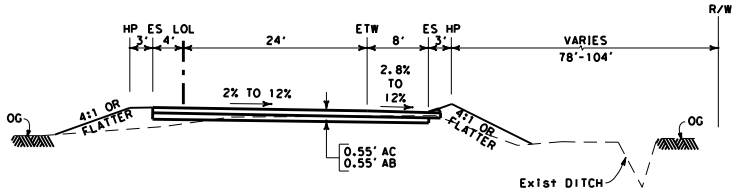
Figure 3f
Alternative 2 Northbound Ramps Typical Sections
Interstate 15/Duncan Canyon Interchange Project



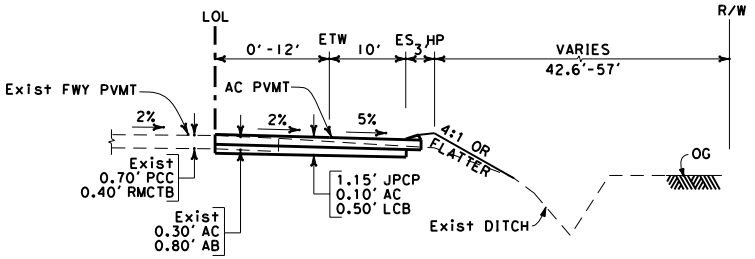
NB ENTRANCE LANE
"R-3" LINE STA 592+72.27 TO 594+44.00



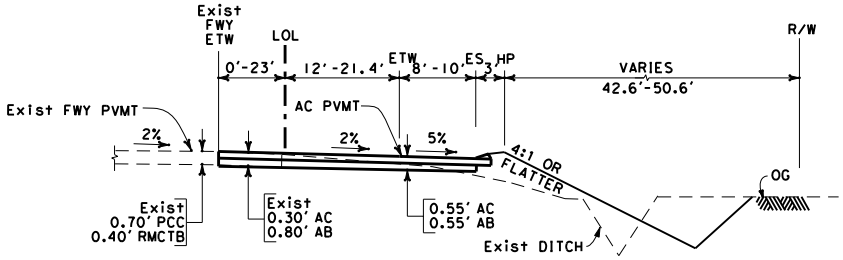
NB ENTRANCE LANE
"R-3" LINE STA 592+40.00 TO STA 592+72.27



NB ENTRANCE LANE
"R-3" LINE STA 587+43.58 TO STA STA 592+40.00



NB ENTRANCE LANE
"R-3" LINE STA 600+29.86 TO RTE 15 STA 606+34.64



NB ENTRANCE LANE
"R-3" LINE STA 594+44.00 TO STA 600+29.86

K:\GIS\PROJECTS\DUNCAN_CANYON\06407_06\MAPDOC\FIG_3G_NB_RAMPS_ALT2.AI CM (05-04-07)

SOURCE: LAN Engineering

Figure 3g
Alternative 2 Northbound Ramps Typical Sections
Interstate 15/Duncan Canyon Interchange Project